

3. (Withdrawn) The biocompatible device according to claim 1 wherein said biocompatible device comprises an electronic device.
4. (Withdrawn) The biocompatible device according to claim 3 wherein said biocompatible device comprises a magnet.
5. (Withdrawn) The biocompatible device of claim 3 wherein said biocompatible device is at least partially coated with an ultra-nanocrystalline diamond film that comprises an electrical insulator.
6. (Withdrawn) The biocompatible device of claim 3 wherein said biocompatible device is at least partially coated with an ultra-nanocrystalline diamond film that comprises an electrical conductor.
7. (Withdrawn) The biocompatible device according to claim 3 wherein said thin film is doped to provide for electrical conductivity.
8. (Withdrawn) The biocompatible device according to claim 7 wherein a thin film of ultra-nanocrystalline diamond is doped to form one or more electrodes, where said one or more electrodes are an integral part of said thin film, for communicating electrical signals with living tissue.
9. (Withdrawn) The biocompatible device according to claim 7 wherein said doping is selective, forming electric conductivity in some locations and electrical insulation in other locations.
10. (Presently Amended) The biocompatible device according to claim 3-27 wherein said ~~electronic device~~ integrated circuit comprises a sensor.

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11. (Presently Amended) The biocompatible device according to claim ~~3~~27 wherein said ~~electronic device~~integrated circuit comprises a stimulator.
12. (Original) The biocompatible device according to claim 11 wherein said stimulator comprises a retinal electrode array prosthesis.
13. (Withdrawn) The biocompatible device according to claim 1 wherein said biocompatible device comprises an electrically conducting wire.
14. (Withdrawn) The biocompatible device according to claim 13 wherein said electrically conducting wire comprises a coil.
15. (Presently Amended) The biocompatible device according to claim ~~1~~27 wherein said ultra-nanocrystalline diamond coating~~thin film~~ is approximately constant in thickness over uneven portions of said device to provide a smooth coating with rounded edges.
16. (Presently Amended) The biocompatible device according to claim ~~1~~27 wherein said ultra-nanocrystalline diamond coating~~thin film~~ is patterned by photolithography.
17. (Presently Amended) The biocompatible device according to claim ~~1~~27 wherein said ultra-nanocrystalline diamond coating~~thin film~~ is patterned by selective seeding.
18. (Presently Amended) The biocompatible device according to claim ~~1~~27 wherein said ultra-nanocrystalline diamond coating~~thin film~~ is patterned by oxygen etching.
19. (Withdrawn) The biocompatible device according to claim 1 wherein said ultra-nanocrystalline diamond forms a capacitive relationship with living tissue that is in close proximity to said biocompatible device.
20. (Withdrawn) A method of hermetically sealing an implantable biocompatible device comprising:

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providing an implantable biocompatible device;
depositing a thin film coating of ultra-nanocrystalline diamond on said implantable biocompatible device forming a biocompatible, hermetic seal.

21. (Withdrawn) The method according to claim 20 wherein
said step of depositing said thin film coating includes depositing said thin film coating in a constant thickness to provide for a smooth rounded package.

22. (Withdrawn) The method according to claim 20 further comprising
the step of patterning said thin film by photolithography.

23. (Withdrawn) The method according to claim 20 further comprising
the step of patterning said thin film coating by selective seeding.

24. (Withdrawn) The method according to claim 20 further comprising
the step of patterning said thin film coating by oxygen etching.

25. (Withdrawn) The method according to claim 20 further comprising
the step of doping said thin film coating to provide for electrical connectivity.

26. (Withdrawn) The method according to claim 25 wherein
said step of doping is selective, providing for electrical conductivity in some locations and electrical insulation in other locations.

27. (Previously Added) A biocompatible device which communicates electrical signals with tissue in a living body, comprising:
an integrated circuit, said integrated circuit comprising a semiconductor substrate having at least one surface on which electronic circuitry is formed;
electrodes for contacting the living tissue which are formed on said at least one surface of said semiconductor substrate;

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means for electrically connecting said stimulator electrodes with said electronic circuitry formed on said at least one surface of said semiconductor substrate;
an ultra-nanocrystalline diamond coating that covers all areas of said at least one surface of said semiconductor substrate, except for selected portions of said stimulator electrodes; and
means for making electrical connection with and providing operating power to said electronic circuitry formed on said at least one surface of said semiconductor substrate.

28. (Previously Added) A biocompatible device which communicates electrical signals with tissue in a living body, comprising:
an integrated circuit, said integrated circuit comprising a semiconductor substrate having at least one surface on which electronic circuitry is formed;
electrodes for contacting the living tissue which are formed on said at least one surface of said semiconductor substrate;
means for electrically connecting said stimulator electrodes with said electronic circuitry formed on said at least one surface of said semiconductor substrate;
a diamond coating that covers all areas of said at least one surface of said semiconductor substrate, except for selected portions of said stimulator electrodes; and
means for making electrical connection with and providing operating power to said electronic circuitry formed on said at least one surface of said semiconductor substrate.

29. (Withdrawn) A biocompatible device comprising:
a device for implantation in living tissue; and
a thin film of diamond deposited on said biocompatible device wherein said thin film forms at least a portion of a biocompatible hermetically sealed package.

30. (Withdrawn) A method of hermetically sealing an implantable biocompatible device comprising:
providing an implantable biocompatible device; and
depositing a thin film coating of diamond on said implantable biocompatible device forming a biocompatible, hermetic seal.

31. (Withdrawn) A biocompatible device which communicates electrical signals with tissue in a living body, comprising:
an electrode for stimulating living tissue, said electrode having at least one surface; and
a thin layer of diamond on said at least one surface of said electrode, wherein said electrode is suitable to form a capacitive relationship with the living tissue.

32. (Withdrawn) The electric circuit of claim 31, wherein said thin layer of diamond is comprised of ultra-nanocrystalline diamond.

33. (Withdrawn) A biocompatible device which communicates electrical signals with living tissue, comprising:
a first electrode; and
a second electrode separated from said first electrode by a thin layer of diamond insulating film thereby causing a capacitive relationship between said first electrode and said second electrode.

34. (Withdrawn) The biocompatible device of claim 33 wherein said thin layer of diamond is comprised of ultra-nanocrystalline diamond.

35. (Withdrawn) The biocompatible device of claim 33 wherein said first electrode is proximate to said second electrode.

36. (Withdrawn) The biocompatible device of claim 33 wherein said first electrode is coated with said thin layer of diamond.